

TAG 3.2 Read
What Is the Relationship Between
Mass and Acceleration?

Name _____
Hour _____ Date _____

Read p. 161.

Which of Newton's Laws are we going to focus on in this section?



Force, Mass, and Acceleration

Read p. 162.

What kind of relationship is there between mass and acceleration?

What kind of relationship is there between net force and acceleration?

Identify each example as a direct relationship or inverse relationship.

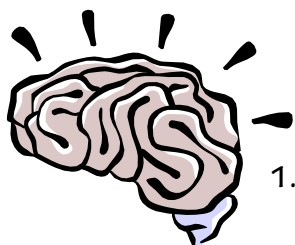
The higher the temperature, the more quickly the ice cube will melt. _____

The more you eat, the more mass you will have. _____

The greater the distance between two objects, the less gravitational pull there is between them.

The greater the mass of two objects, the greater the gravitational pull there is between them.

Read p. 163 through the top of p. 165. Write the equation representing Newton's 2nd Law:



Stop and Think: Read the questions on p. 165 and answer them.

1.

2.

Force, Mass, and Acceleration in Your Propeller Car

Read the bottom of p. 165 and the top of p. 166.



Reflect (pg. 166): Answer these questions.

1. In what ways can you change the mass of your propeller car and the net force acting on it?
2. According to Newton's second law, what effect would doubling both the net force of propulsion and the mass of a propeller car have on its acceleration?
3. If the propeller motor is not changed from trial to trial, how could you predict the effect of changing mass on your car's acceleration?